APPENDIX B: XML for Example in Figure 3

TigerNews.xml:

```
<!-- Tiger News MM Description -->
 5
     <MM Stream id="TigerNews5-28-1000">
            <MM Object Set>
10
                  <!-- Tiger News -->
                  <MM Object type="GLOBAL" id="mmog0"
     Object Node Ref="mmon0">
                         <MM Obj Semantic Features>
                                <who> <concept> Anchorperson: S. Paek </concept>
15
     </who>
                                <what object> <concept> The Tiger </concept>
     </what object>
                                <what action>
                                       <concept> Tiger is Feeding </concept>
20
                                </what action>
                                <where> <concept> Nigeria, Africa </concept> </where>
                                <when> <concept> May 28, 2000 </concept> </when>
                                <why> <concept> Nature news </concept> </why>
                         </MM Obj Semantic Features>
                         <MM Obj Temporal Features>
25
                                <Duration> ... </Duration>
                         </MM Obj Semantic Features>
                  </MM Object>
30
                  <!-- Audio 1: Anchorperson -->
                  <MM Object type="LOCAL" id="mmol1" Object Node Ref="mmon1"</p>
                                              Entity Node Ref="mmen1">
                         <Media Object Set>
                                <!-- Global audio object -->
35
                                <Audio Object type="GLOBAL" id="ao1g0"
                                              Object Node Ref="mmol1on0">
                                      <!-- Features of the audio object: semantics, media,
     etc -->
                                </Audio Object>
                                <!-- Introduction of news report -->
40
                                <Audio Object type="SEGMENT" id="ao1s1"
                                              Object Node ref="mmollon1"
                                              Entity Node Ref="mmollen1">
```

```
<!-- Features of the audio object: semantics, media,
             etc -->
                                        </Audio Object>
                                        <!-- Comments on news -->
        5
                                        <Audio Object type="SEGMENT" id="ao1s2"
                                                     Object Node ref="mmollon2"
                                                      Entity Node Ref="mmol1en2">
                                              <!-- Features of the audio object: semantics, media,
             etc -->
                                        </Audio Object>
       10
                                 </Media Object Set>
                                 <Object Hierarchy>
                                        <Object Node id="mmollon0" Object Ref="ao1g0">
                                              <Object Node id"mmollon1" Object Ref="ao1s1"</pre>
       15
                                              <Object_Node id"mmollon0" Object Ref="ao1s2"</pre>
</Object Node>
                                 </Object Hierarchy>
       20
                                 <Entity Relation Graph type="TEMPORAL">
                                        <Entity Relation>
ļ⇒
                                              <Relation type="TEMPORAL">
٠...
                                                     <Temporal_Sequential />
M
                                              </Relation>
       25
                                              <Entity Node id="mmollen1" Objec Ref="aols1"</pre>
                                              <Entity Node id="mmollen2" Objec Ref="ao1s2"
</Entity Relation>
30
                                 </Entity Relation Graph>
                                 <MM Obj Media Features>
                                        <Data Location> ... </Data Location>
                                 </MM Obj Media Features>
                                 <MM Obj Semantic Features> ...
             </MM_Obj_Semantic Features>
       35
                                 <MM Obj Temporal Features>...
             </MM Obj Temporal Features>
                          </MM Object>
       40
                          <!-- Audio 2: Tiger -->
                          <MM Object type="LOCAL" id="mmol2" Object Node Ref="mmon2"
                                                      Entity Node Ref="mmen2">
                                 <!-- Single-media objects and features -->
                          </MM Object>
```

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```
<!-- Video: Tiger News' Video -->
                  <MM Object type="LOCAL" id="mmol3" Object Node Ref="mmon3"
                                             Entity Node Ref="mmen3">
 5
                         <!-- Single-media objects and features -->
                  </MM Object>
                  <!-- Anchorperson -->
                  <!-- Groups the objects related to Anchorperson across media -->
10
                  <MM Object type="LOCAL" id="mmol4" ... >
                         <Media Object Set>
                               <Video_Object type="SEGMENT" Object Ref="vos1" />
                               <Audio Object type="GLOBAL" Object Ref="ao1g0" />
                         </Media Object Set>
15
                  </MM Object>
                  <!-- Tiger -->
                  <MM_Object type="LOCAL" id="mmol5" ... >
                         <!-- Object and features -->
20
                  </MM Object>
            </MM Object Set>
            <Object Hierarchy>
                  <Object Node id="mmon0" Object_Ref="mmog0">
                         <Object Node id="mmon1" Object Ref="mmol1" />
25
                         <Object Node id="mmon2" Object Ref="mmol2" />
                         <Object Node id="mmon3" Object Ref="mmol3" />
                  </Object Node>
            <Object Hierarchy>
30
            <Entity_Relation_Graph type="TEMPORAL.SMIL">
                  <Entity_Relation>
                         <Relation type="TEMPORAL">
                               <Temporal_Parallel />
35
                         </Relation>
                         <Relation_Node id ="mmen1" Object Ref="mmol1" />
                         <Relation Node id ="mmen2" Object Ref="mmol2" />
                         <Relation Node id ="mmen3" Object Ref="mmol3" />
                  <Entity Relation>
40
           <Entity Relation Graph>
     </MM Stream>
     <!-- Tiger News MM Description -->
```